

WHAT IS CLAIMED IS:

1. An improved surgical console for use with a handheld tissue fragmentation device comprising:

a portable base having an upper portion;

5 an adjustable display head mounted to the upper portion of the base, the display head providing rotational and translational adjustment relative to the base;

an aspiration system for coupling to a fragmentation device for aspirating fluid and tissue fragmented by the fragmentation device from a surgical site;

10 an irrigation system for coupling to the fragmentation device for supplying irrigating fluid to the surgical site for suspending tissue fragmented by the fragmentation device; and

a power system for coupling to the fragmentation device for energizing a transducer of the fragmentation device for fragmenting tissue.

15 2. The surgical console as recited in claim 1, further comprises a fragmentation device which includes a cable having a terminal for connecting to the power system.

3. The surgical console as recited in claim 2, wherein the terminal includes a connector pattern for identifying the fragmentation device to the console.

20 4. The surgical console as recited in claim 2, wherein the fragmentation device has a memory, the memory for storing data and identifying the fragmentation device to the console when coupled to the console.

5. The surgical console as recited in claim 1, wherein the irrigation system includes a cooling system for cooling a fragmentation device.

6. The surgical console as recited in claim 5, further comprising a fluid control device for monitoring cooling fluid levels and filling and draining the cooling fluid levels responsive to feedback from the fragmentation device.

7. The surgical console as recited in claim 1, wherein the display head includes touchscreen input.

8. The surgical console as recited in claim 1, wherein the power system includes a tissue release function such that aspiration is turned off while maintaining power to a transducer of a fragmentation device.

9. The surgical console as recited in claim 1, wherein the power system includes a laparoscopic function such that aspiration is activated only when the ultrasonics are activated.

10. An improved surgical console for ultrasonic fragmentation surgery for use with a handheld tissue fragmentation device comprising:

a portable base having an upper portion, the base forming support structures therein;

an adjustable display head mounted to the upper portion of the base, the display head providing rotational and translational adjustment relative to the base;

an aspiration system for coupling to the fragmentation device for aspirating fluid and tissue fragmented by the fragmentation device from a surgical site, the

aspiration system including a tissue receptacle for receiving fragmented tissue from the surgical site;

an irrigation system for coupling to the fragmentation device for supplying irrigating fluid to the surgical site for suspending tissue fragmented by the fragmentation device, the irrigation system including a reservoir for storing the irrigating fluid therein; and

a power system for energizing an ultrasonic transducer of the fragmentation device for ultrasonically fragmenting tissue.

11. The surgical console as recited in claim 10, further comprising a detachable fragmentation device including a cable having a terminal for connecting to the power system.

12. The surgical console as recited in claim 11, wherein the terminal includes a connector pattern for identifying the fragmentation device to the console.

13. The surgical console as recited in claim 11, wherein the fragmentation device has a memory, the memory for storing data and identifying the fragmentation device to the console when coupled to the console.

14. The surgical console as recited in claim 10, wherein the irrigation system includes a cooling system for cooling a fragmentation device.

15. The surgical console as recited in claim 14, further comprising a fluid control device for monitoring cooling fluid levels and filling and draining the cooling fluid levels responsive to feedback from a fragmentation device.

16. The surgical console as recited in claim 10, wherein the display head includes touch screen input.

17. The surgical console as recited in claim 10, wherein the power system includes a tissue release function such that power to a transducer of a fragmentation device is turned off while maintaining aspiration.

18. The surgical console as recited in claim 10, wherein the power system includes a laparoscopic function such that power to a transducer of a fragmentation device is turned on only while maintaining aspiration.

19. A surgical system for fragmentation of tissue comprising:
a portable base having an upper portion;
an ultrasonic tissue fragmentation device coupled to the base;
an adjustable display head mounted to the upper portion of the base, the display head providing rotational and translational adjustment relative to the base, the display head for providing data and permitting input from an operator on a display screen disposed thereon;
an aspiration system coupled to the fragmentation device for aspirating fluid and tissue fragmented by the fragmentation device from a surgical site;
an irrigation system coupled to the fragmentation device for supplying irrigating fluid to the surgical site for suspending tissue fragmented by the fragmentation device;
a power system coupled to the fragmentation device for energizing an ultrasonic transducer of the fragmentation device for fragmenting tissue by supplying ultrasonic vibrations to a fragmentation tip, the power system including a frequency generator for generating output frequencies to the transducer; and

a control system for controlling and coordinating the power system, the aspiration system and the irrigation system during a surgical procedure.

5 20. The surgical console as recited in claim 19, wherein the fragmentation device includes a cable having a terminal for connecting to the power system.

 21. The surgical system as recited in claim 20, wherein the terminal includes a connector pattern for identifying the fragmentation device to the console.

10 22. The surgical system as recited in claim 20, wherein the fragmentation device has a memory, the memory for storing data and identifying the fragmentation device to the console when coupled to the console.

 23. The surgical system as recited in claim 19, wherein the irrigation system includes a cooling system for cooling the fragmentation device.

15 24. The surgical system as recited in claim 23, further comprising a fluid control device for monitoring cooling fluid levels and filling and draining the cooling fluid levels responsive to feedback from the fragmentation device.

 25. The surgical system as recited in claim 19, wherein the display head includes touch screen input.

20 26. The surgical system as recited in claim 19, wherein the power system includes a tissue release function such that aspiration is turned off while maintaining power to the transducer.

27. The surgical system as recited in claim 19, wherein the power system includes a laparoscopic function such that aspiration is activated only when the ultrasonics are activated.